



Missouri Department of Natural Resources  
**Total Maximum Daily Load Information Sheet**

## Troublesome Creek

### Water Body Segment at a Glance:

**County:** Marion  
**Nearby Cities:** Hester  
**Length of impairment:** 3.5 miles  
**Pollutant:** Manganese  
**Source:** Natural

**Note:** This river was deleted from the 2004/2006 303(d) List because the criterion for manganese has been removed from Missouri's Water Quality Standards.



See, also, the Sediment Information Sheet

### Water Body Removed from List: Jan. 16, 2009

#### Description of the Problem

##### Beneficial uses of Troublesome Creek

- Livestock and Wildlife Watering
- Protection of Warm Water Aquatic Life
- Protection of Human Health (Fish Consumption)
- Whole Body Contact Recreation – Category B
- Drinking Water Supply

##### Use that was listed as impaired

- Drinking Water Supply

#### Standards that apply

There is **no longer** a criterion in the Missouri Water Quality Standards (10 CSR 20-7.031) for manganese. The standard used to be 50 µg/L as the maximum amount of manganese allowed for Drinking Water Supplies. This was an aesthetic standard that sought to protect a water supply against possible taste, odor and laundry staining problems caused by excessive amounts of manganese. Exceedence of that standard was not a threat to human health.

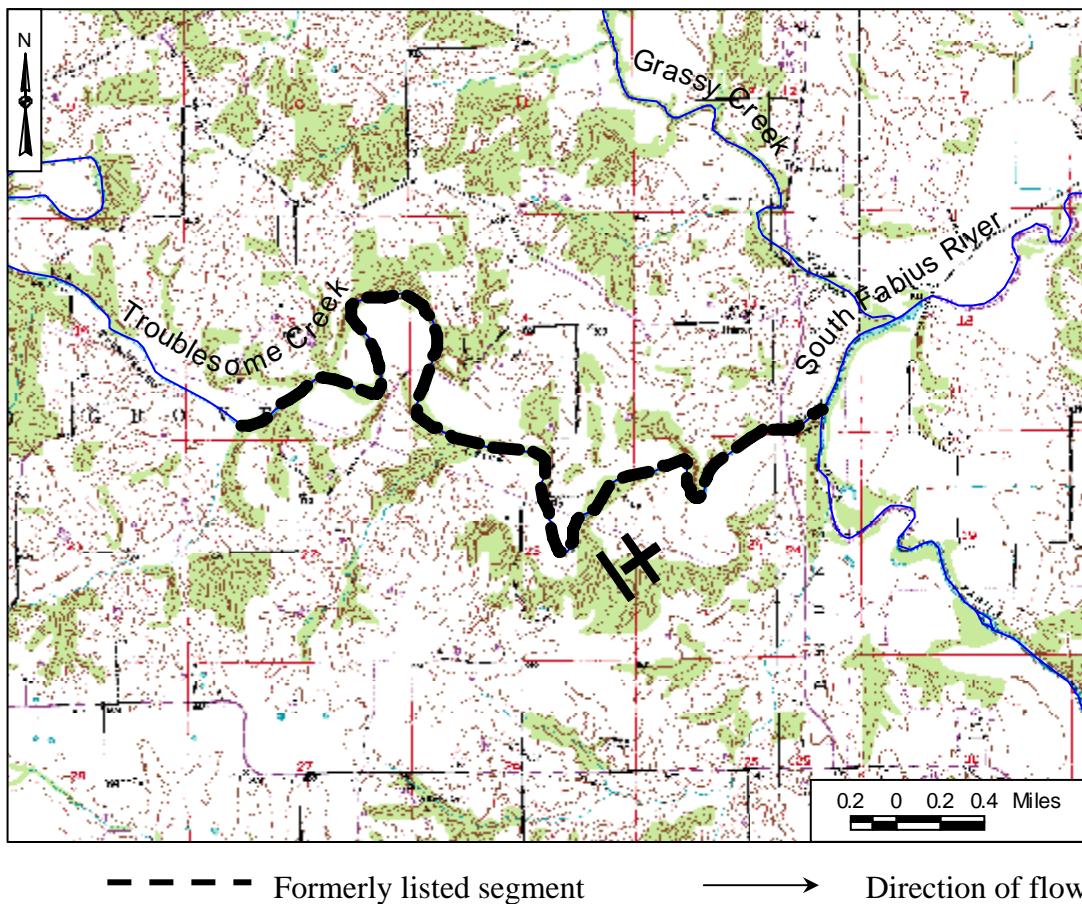
#### Background Information

There has yet to be any monitoring of Troublesome Creek for dissolved manganese. Monitoring of other north Missouri streams (see information sheets for Salt River, North Fabius River, Middle Fabius River and Fox River) showed levels of dissolved manganese that exceeded the former state

criteria. Based on those data, Troublesome Creek was believed also to have elevated levels of dissolved manganese. There are no known significant man-made sources of manganese in this watershed. The source of the manganese is believed to be natural weathering and erosion of earth materials (soils and subsoils) in this watershed.

Manganese does not present any human health hazards, but can be responsible for offensive taste and appearance in drinking water, if it is present. However, drinking water supplies can remove manganese if necessary in the finished water sold to customers. The Missouri Clean Water Commission voted to remove manganese and iron from the list of impairments to drinking water sources since they do not cause health problems, do not adversely affect aquatic life and can be removed by drinking water treatment facilities. That action took effect Dec. 31, 2005 and the U.S. Environmental Protection Agency removed this river from the 2004/2006 303(d) List Jan. 16, 2009.

#### Formerly Listed Segment of Troublesome Creek in Marion County, Missouri



#### For more information call or write:

Missouri Department of Natural Resources,  
Water Protection Program  
P.O. Box 176, Jefferson City, MO 65102-0176  
1-800-361-4827 or 573-751-1300 office  
573-522-9920 fax  
Program Home Page: [www.dnr.mo.gov/env/wpp/index.html](http://www.dnr.mo.gov/env/wpp/index.html)